that Prof. Wiegand does not seem to have been able to discover material of Clayton's 162.

In any event, as has often been pointed out (S. F. Blake, RHODORA **20**: 21), one is not justified in laying stress on a specimen preserved in an old herbarium and taking it as the type of a species, unless it agrees with the diagnosis of the species given by the author. In the present case as the specimen preserved does not accord with the description I think it should not govern and as the description does exactly answer a plant now known from Virginia I think it should be applied to it.

In conclusion then I would use the following names:

(1) Species No. 1. *Eupatorium purpureum* L.
(2) Species No. 2. *Eupatorium Bruneri* A. Gray (probably)
(3) Species No. 3. *Eupatorium maculatum* L.
(4) Species No. 4. *Eupatorium trifoliatum* L. (provisionally)

NEW YORK CITY.

LIGHT CORRELATED VARIATIONS OF THE STERILE STEM OF EQUISETUM SYLVATICUM.

N. M. GRIER, PH. D.

A FAIRLY abundant growth of *Equisetum sylvaticum* L. was observed at Bellevue, Pennsylvania. One section of the growth was constantly well shaded, while the other had the benefit of sunlight throughout the day. In corroboration of the differences appearing at first sight between the plants of these two sections, one hundred plants from each were collected and the following tabulations made.

NUMBER OF ESTIMATED WHORLS PER PLANT

Classes	7	8	9	10	11	12	13	14	15
Sun			5	4	14	25	23	15	12
Shade	1	2	3	8	18	23	28	13	4

A conclusion derived from the above is that plants of this species growing in the sun have on the average a larger number of whorls

than those growing in the shade; 11–13 whorls to the stem being commonest under the conditions.

Next, it was attempted to determine the relative number of lateral branches on the verticils of the plants from these sources. For this purpose, there was chosen the verticil next to the lowest one on the stem, as probably having had the fullest protected growth.

NUMBER OF BRANCHES IN NEXT TO LOWEST VERTICIL

Classes	7	8	9	10	11	12	13	14
Sun		7	7	18	14	24	22	8
Shade	1	10	20	24	24	10	6	5

The inference which may be taken from this table is that plants growing in the sun have more leaves on this particular whorl, and on probably all the others also. The mode in this case is also from 11–13. Whether coincidences like the latter could be made a diagnostic feature of the plant could be more certainly determined from a larger number of specimens than was available to the writer. Of course maturity may play a part, since these specimens were collected the last week of June. Gray's New Manual (p. 52) gives 8–14 ridges as being characteristic for the plant. The whorls in shade specimens, while possessing a smaller number of leaves were usually spread over a greater space than those fully exposed to the sun. In efforts to adjust to the light relation, many specimens lost their characteristic storied or conical shape and assumed a one-sided form a great deal like that of an ostrich plume. This was entirely due to the bending upwards of the leaves on the less illuminated side of the whorls.

While sun specimens were observed to be uniformly longer than those growing in the shade, a convenient indicative measure of this was the comparative number of defoliated nodes in each group as counted from the lowest verticil to the rootstock.

NUMBER OF NODES FROM LOWEST VERTICIL TO ROOTSTOCK

Classes	1	2	3	4	5	6	7	8
Sun		9	5	5	22	32	14	13
Shade	1	8	22	22	23	19	5	

From the last table it appears that stems growing in the light are longer, or at least have their whorls of leaves growing higher on the stem than those growing in the shade.

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A New Station for Gaylussacia brachycera.—Until recently there have been but two known stations of the box huckleberry, one near New Bloomfield, Perry County, Pennsylvania, of about eight acres in extent, and the other at Indian River, Sussex County, Delaware, which covers an area of roughly ten feet square.

To these stations may now be added a third, discovered by me on July 18, 1920, near Losh's Run, Perry County, Pennsylvania. Specimens compared at the herbaria of Harvard University and of the New York Botanical Garden with herbarium sheets from the two stations already known show without doubt the identity of the plant.

So far as observed this stand was fruiting freely in open portions, whereas in the shade little fruit was seen.

On August 22nd I again visited the colony, accompanied by Dr. John K. Small and Dr. Edgar T. Wherry. We found the plant growing over a larger area than I had at first supposed. It covers the northern slope of a mountain ridge for at least a mile, the width of the colony averaging about two hundred feet. At some points it reaches the top of the ridge. Its boundaries seem to be clearly defined, on the west by the river, on the north by a mountain stream, on the east and south by cultivated fields and streams. The theory that the whole patch has spread by the root from a single plant seems to be substantiated, as at no point has the plant been found on the opposite side of the stream. This colony differs slightly from the one at New Bloomfield, the leaves of the new colony being narrower and the berries more nearly round.

On November 5, I explored the neighboring ridges and found three additional colonies of the *Gaylussacia,* covering a large area. The growth is confined to the northern slopes, the ridges running east and west; I failed to find a single plant on the southern slopes The growth is very dense, forming a perfect mat where the condi-